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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/782,894

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Paul Lapstun

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SILVERBROOK RESEARCH PTY LTD  
393 DARLING STREET  
BALMAIN, 2041  
AUSTRALIA

EXAMINER

BUKOWCZYK, JEREMY

ART UNIT

PAPER NUMBER

3609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/782,894

Applicant(s)

LAPSTUN ET AL.

Examiner

Jeremy Bukowczyk

Art Unit

3609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :09/09/2004, 11/17/2004, 11/22/2004, 01/27/2005, 07/24/2006 .

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: ROBOT OPERATING WITH INTERFACE  
SURFACE.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 3609

5. Claims 1, 5, 7, 8, 15, 33, and 34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 13-16 of U.S. Patent No. US 7,148,644 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention of claims 1, 5, 7, 8, 15, 33, and 34 encompasses all that is recited in claims 1 and 13-16 of U.S. Patent No. US 7,148,644 B2. That is claims 1 and 13-16 of U.S. Patent No. US 7,148,644 B2 falls entirely within the scope of claims 1, 5, 7, 8, 15, 33, and 34. Specifically, "a robot for marking an interface surface" is a species of the generic category defined by "a robot adapted to operate in association with an interface surface." Claims 1, 5, 7, 8, 15, 33, and 34 reciting "a robot adapted to operate in association with an interface surface" are anticipated by claims 1 and 13-16 of U.S. Patent No. US 7,148,644 B2 reciting "a robot for marking an interface surface."

6. Claims 2-4, 10, 11, 18, 19, 23, 28-31, and 35 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Kasuga et al. (US, 6,470,235 B2).

As per claims 2 and 35, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a processor adapted to select and execute a computer application based on at least the identity of the interface surface and generate movement instructions.

Kasuga in the same field of invention teaches a processor (21) adapted to select and execute a computer application (col. 8, lines 14-21) based on at least the identity of the interface surface and generate movement instructions (col. 8, lines 21-25).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a processor as taught by Kasuga, in order to control the movement of the robot.

As per claims 3-4 and 31, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a plurality of computer applications stored in at least one memory of the robot.

Kasuga in the same field of invention teaches a plurality of computer applications stored in at least one memory of the robot (col. 8, lines 9-13).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a plurality of computer applications stored in at least one memory of the robot as taught by Kasuga, in order to play different games such as soccer or chess.

As per claims 10 and 32, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose using a wireless radio-frequency signal.

Kasuga in the same field of invention teaches using a wireless radio-frequency signal (col. 10, lines 34-36).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S.

Art Unit: 3609

Patent No. 7,148,644 B2 to include using a wireless radio-frequency signal as taught by Kasuga, in order to remotely control the robot.

As per claim 11, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a plurality of reference points using two-dimensional coordinate positions.

Kasuga in the same field of invention teaches a plurality of reference points using two-dimensional coordinate positions (col. 3, lines 4-9).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a plurality of reference points using two-dimensional coordinate positions as taught by Kasuga, in order to locate the robot on a two-dimensional grid.

As per claim 18 and 19, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a speaker and a microphone.

Kasuga in the same field of invention teaches a speaker (17) and a microphone (16).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a speaker and a microphone as taught by Kaluga, in order to communicate with a user.

As per claim 23, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose being remotely controlled by a user.



Art Unit: 3609

Kasuga in the same field of invention teaches a robot being remotely controlled by a user (col. 9, lines 3-5).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include being remotely controlled by a user as taught by Kasuga, in order increase the capabilities of the robot's ability play a game like soccer on field without the need for a hard wired controller.

As per claims 28 and 30, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose at least one motor and at least one drive mechanism to propel the robot over the interface surface and at least one motor controller to control the motor.

Kasuga in the same field of invention teaches a motor (51) and a drive mechanism to propel the robot over the interface surface (col. 7, lines 34-40) and at least one motor controller to control the motor (50).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include at least one motor and at least one drive mechanism to propel the robot over the interface surface and at least one motor controller to control the motor as taught by Kasuga, in order for the robot to be mobile.

As per claim 29, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose selecting a program from a plurality of programs on the computer system.

Art Unit: 3609

Kasuga in the same field of invention teaches selecting a program from a plurality of programs on the computer system (col. 9, lines 6-9).

From this teaching of Kasuga, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include selecting a program from a plurality of programs on the computer system as taught by Kasuga, in order for the robot to adapt as needed with respect to the interface surface.

7. Claims 6, 9, 16, 17, 21, and 22 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Van Kommer (US 6,584,376 B1).

As per claim 6, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a computer system adapted to receive the robot identifier.

Van Kommer in the same field of invention teaches a computer system adapted to receive the robot identifier (col. 5, lines 31-36).

From this teaching of Van Kommer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a computer system adapted to receive the robot identifier as taught by Van Kommer, in order to track a robot with the ability to distinguish a given robot from other robots.

Art Unit: 3609

As per claim 9, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a relay device that is a mobile or cellular telephone.

Van Kommer in the same field of invention teaches a relay device that is a mobile or cellular telephone (30).

From this teaching of Van Kommer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a relay device that is a mobile or cellular telephone as taught by Van Kommer, in order to communicate with a robot.

As per claims 16 and 17, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose an image or video display and an image or video of a remote operator.

Van Kommer in the same field of invention teaches an image or video display (35) and an image or video of a remote operator (col. 5, lines 21-24).

From this teaching of Van Kommer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include an image or video display and an image or video of a remote operator as taught by Van Kommer, in order for the robot to have teleconferencing capabilities.

As per claims 21 and 22, claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose a computer application that

controls play of a game and the robot behavior is characteristic of a piece in the game wherein more than one robot participates.

Van Kommer in the same field of invention teaches a computer application that controls play of a game and the robot behavior is characteristic of a piece in the game (col. 7, lines 26-28) wherein more than one robot participates (col.4, lines 58-60).

From this teaching of Van Kommer, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include a computer application that controls play of a game and the robot behavior is characteristic of a piece in the game wherein more than one robot participates as taught by Van Kommer, in order for a group of robots to play a game such as soccer.

8. Claims 12-14 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Reichlen (6,061,064).

Claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose coded data that is substantially invisible to an unaided human eye printed in infrared absorptive ink and a sensing device that includes an infrared illumination device and an area image sensor.

Reichlen in the same field of invention teaches coded data that is substantially invisible to an unaided human eye (col. 17, lines 54-56) printed in infrared absorptive ink (col. 17, lines 51-54) and a sensing device that includes an infrared illumination device and an area image sensor (170).

From this teaching of Reichlen, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include coded data that is substantially invisible to an unaided human eye printed in infrared absorptive ink and a sensing device that includes an infrared illumination device and an area image sensor as taught by Reichlen, in order to provide signals and commands to a robot such as boundaries on a soccer field.

9. Claim 20 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Lathan et al. (US 2002/0120362 A1).

Claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose movement of the robot that mirrors movement of a remote device communicating with the computer system.

Lathan in the same field of invention teaches movement of the robot that mirrors movement of a remote device communicating with the computer system (paragraph 88).

From this teaching of Lathan, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include movement of the robot that mirrors movement of a remote device communicating with the computer system as taught by Lathan, in order to interact with other robots such as playing defense against another robot in a game of soccer.

10. Claims 24-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Kent (5,854,450).

Claim 1 of U.S. Patent No. 7,148,644 B2 recites a robot for marking an interface surface, but fails to disclose an interface surface that is a game-playing surface having markings that are visible and including a least one game-control that includes resume, resign, new game, gather or the like options.

Kent in the same field of invention teaches an interface surface that is a game-playing surface having markings that are visible and including a least one game-control that includes resume, resign, new game, gather or the like options (col. 51, lines 48-53).

From this teaching of Kent, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of claim 1 of U.S. Patent No. 7,148,644 B2 to include an interface surface that is a game-playing surface having markings that are visible and including a least one game-control that includes resume, resign, new game, gather or the like options as taught by Kent, in order to interact with other robots such as playing defense against another robot in a game of soccer.

11. Claim 27 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. US 7,148,644 B2 in view of Kent (5,854,450) as applied to claim 24 and in further view of Hashiba (JP 08112397 A).

Art Unit: 3609

The combination of Kent and U.S. Patent No. US 7,148,644 B2 discloses the structural elements of the claimed invention, but fails to disclose a chess board for the game playing surface.

Hashiba in the same field of invention teaches a chess board for the game playing surface (paragraph 2).

From this teaching of Hashiba, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the robot of the Kent and U.S. Patent No. US 7,148,644 B2 combination to include a chess board for the game playing surface as taught by Hashiba in order to play chess with robots.

#### ***Allowable Subject Matter***

12. The following is a statement of reasons for the indication of allowable subject matter: Prior art of record fails to teach, or renders obvious, alone or in combination, a robot adapted to operate in association with an interface having disposed therein or thereon coded data indicative of an identity of the interface and of a plurality of reference points of the interface surface which the robot senses coded data from the ground surface and determines its position on a surface from data provided by the surface itself in combination with all other limitations as directly recited in all independent claims.

#### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Bukowczyk whose telephone number is 571-270-3022. The examiner can normally be reached on Mon-Thu 6:30am-5:00pm.

Art Unit: 3609

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jb



**BENNY TIEU**  
**PRIMARY EXAMINER**